Phil Schlabach
11/22/2010

Checking/Turning on BSC HV

Only BSCs #1 (E & W) remain operational . HV is supplied by a Power Designs 1570 supply and set/fanned out by a “COW” in 1RR06D (1st floor counting room, both under the CLC1 monitor/keyboard.

Figure 1: Power Designs 1570 Supply

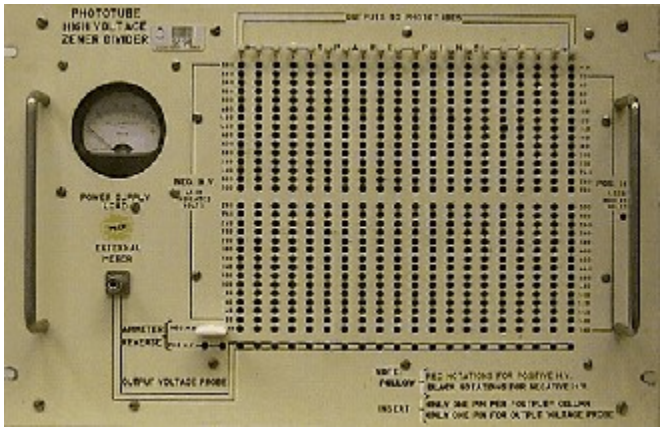

Figure 2: Berkeley COW

The supply is above the COW.

<u>Checking the supply</u>

1. Check that the supply output voltage as shown on the meter. (Note that the switch at the far left upper corner should by “up” - kV scale.) The output should be 1.5kV. If the output is “zero”, the supply is likely off. If it non-zero, the knobs to the right of the supply are probably set wrong (unlikely).

2. The supply latches “off” when it loses power, and we usually forget to reset it. The two switches which control the “on/off” function are below the meter. There are two lights above the

switches which indicate the status. The switches remain “up” when the supply latches “off”; the lights should give a good indication that the power is gone.[1]

Turning the supply back on

1. Flip the HV switch “down” (“off”).
2. Flip the AC switch “down” (“off”).
3. Flip the AC switch “up” (“on”). The light should go on.
4. Flip the HV switch “up” (“on”). The light should go on, and you should see 1.5kV on the meter.

Checking the output to the PMTs

HV from the back of the supply goes to the COW where is tweaked and supplied to the individual PMTs.

The output to the PMTs can be checked using the “High Voltage Vernier and Monitor Unit” mounted below the COW. At the right of the unit is a switch (labeled “channel selector”) to select the COW channel; below that is a BNC connector (labeled “channel output”) with the output of a 1000:1 HV divider for the selected channel. BSC1-W is channel #1, BSC-1E is channel #9. Both should read ~-1.1V:

(-1500V from the supply less 300-400V from the COW setting)/1000= ~-1.1V

1. The light for the AC switch seems to be burned out. (PS: 11/18/2010)